

Oct 4

Formula

$$\frac{\text{small}}{\text{big}} \times 100 = \%$$

7, 9  
 ↑     ↑  
 my    total  
 score  
 Math  
 Quiz

$$\frac{7}{9} = 0.7777777778$$

$$\times 100$$

$$\underline{\underline{77.78\%}}$$

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What % of this room is over 51 years of age?

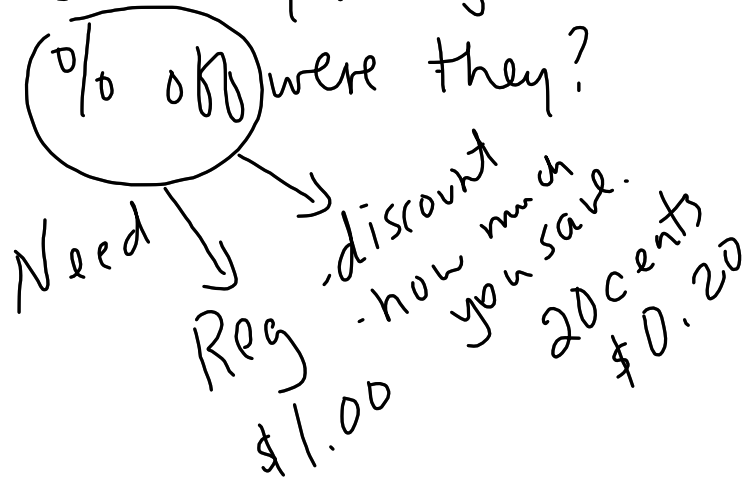
Need small is 1  
Large is 21.

$$\frac{1}{21} \times 100 = 4.76\%$$

③ Put \$100 in bank. Earned \$2 interest. What % was the rate?

$$\frac{\text{Small}}{\text{big}} \times 100 = \frac{2}{100} \times 100 = 2\% \text{ is the rate.}$$

④ Albert buys chips for 80 cents on sale. They were regular \$1. What % off were they?



$$\frac{\text{Small}}{\text{big}} \times 100 = \frac{0.20}{1.00} \times 100$$

$$= 20\% \text{ OFF}$$

What is an easy wrong answer?

Not the discount  $\frac{0.80}{1.00} \times 100 = 80\% \text{ OFF}$

⑤  $6\frac{1}{2}$  Foot Christmas Tree with color changing light.

Reg \$159.99

Sale: \$79.99

$\% \text{ OFF?}$

Find the amount saved (OFF)

①  $159.99 - 79.99$

②  $\frac{80 \text{ saved}}{159.99} \times 100 = 50.00\%$   
 $\text{OFF}$

⑥ Blender

Reg: \$129.99

Sale: \$79.99

What % did Nancy save?

①  $129.99 - 79.99 = \underline{\underline{50}}$  saved

②  $\frac{50}{129.99} \times 100 = 38.46\% \text{ OFF.}$

2nd Snag (problem)

Bank rates are annual.

If you leave \$ in the bank for more than one year, you must account for that!

Ex. 2% APR annual percent rate.

- ⑦ Put \$100 in bank. Earned \$2 interest. What % was the rate if I left it in for 2 years?

$$\frac{\text{small}}{\text{big}} \times 100$$

a) 4%     $2\% \times 2 = 4\%$   
 b) 1%     $2\% \div 2 = 1\%$

c) 2% x

d) 7% x

Use simple interest formula to prove a) or b)!

$$I = P \times r \times t$$

a) 4%     $I = \$100 \times 0.04 \times 2 = \$8$

b) 1%     $I = \$100 \times 0.01 \times 2 = \$2$

← yrs  
 ↓ interest earned.

What if I put \$100 in the bank for 3 years and earn \$2! What is the rate?

- ~~a) 4%~~  
 b) 1% too high.  
~~c) 2%~~  
~~d) 7%~~

Try it.  $I = P \times r \times t$   
 $= \$100 \times 0.01 \times 3 = \$3$  too much  
 0.5%

Try  $\$100 \times 0.005 \times 3 = \$1.50$

Try  $\$100 \times 0.0067 \times 3 =$   
 0.067% \$2.01